

IN THE CLAIMS:

Please cancel claims 3, 8, and 13 without prejudice, and amend claims 1, 6, and 11 as follows:

1. (Currently Amended) A head positioning control method for a disk device for positioning a head to a predetermined position of a disk, comprising:

a step of demodulating a position signal of said disk read by said head;

a step of calculating the demodulation position according to said demodulation result;

a step of calculating control quality according to the position errors between said demodulation position and a target position and controlling actuator which drives said head;

wherein said calculation step comprises a step of correcting said demodulation result including PosN and PosQ obtained by a four phase offset signal of said position signal with a dynamically-obtained correction value which depends on an actual moving speed of said head and obtaining the demodulation position; and

a step of detecting said moving speed of the head based on said position signal read by said head,

wherein said demodulation step further comprises:

a step of demodulating track number and offset information from said position signal, and

said calculation step comprises:

a step of selecting said track number as said demodulation position when the moving speed of said head is faster than a predetermined speed; and

a step of calculating a demodulation position by correcting said PosN and PosQ with said correction value obtained by compensated moving speed with a gain according to recording positions of the offset information in said position signal of said disk.

2. (Original) The head positioning control method according to Claim

1, wherein said demodulation step comprises:

a step of demodulating a first position information and a second position information, which have different phases from each other, from said position signal; and

said calculation step comprises:

a step of comparing said first position information and said second position information;

a step of correcting said first position information with a first correction value, which depends on the moving speed of said head, according to said comparison result; and

a step correcting said second position information with a second correction value, which depends on the moving speed of said head, according to said comparison result.

3. (Cancelled)

4. (Original) The head positioning control method according to Claim 1, wherein said demodulation step comprises:

a step of demodulating a track number and offset information from said position signal; and

said calculation step comprises:

a step of correcting said offset information with a correction value where gain, which depends on the recording position of said offset information, is added to the moving speed of said head with the recording position of said track number as a reference.

5. (Original) The head positioning control method according to Claim 1, wherein said demodulating position signal of a magnetic disk read by a magnetic head.

6. (Currently Amended) A head positioning control device for a disk device for positioning a head to a predetermined position of a disk by driving an actuator, comprising:

a demodulation circuit which demodulates a position signal of said disk read by said head; and

a control circuit which calculates a demodulation position according to said demodulation result and controls the actuator for driving said head by calculating control quantity according to the position errors between said demodulation position and the target position,

wherein said control circuit corrects said demodulation result including PosN and PosQ obtained by a four phase offset signal of said position signal with a dynamically-obtained correction value which depends on an actual moving speed of said head and calculates said demodulation position; and

wherein said control circuit further detects said moving speed of the head based on said position signal read by said head,

wherein said demodulation circuit demodulates a track number and offset information from said position signal, and

wherein said control circuit selects said track number as said demodulation position when the moving speed of said head is faster than a predetermined speed, and calculates a demodulation position by correcting said PosN and PosQ with said correction value obtained by compensated moving speed with a gain according to recording positions of the offset information in said position signal of said disk.

7. (Original) The head positioning control device according to Claim 6, wherein

said demodulation circuit demodulates a first position information and a second position information, which have different phases from each other, from said position signal; and

said control circuit compares said first position information and said second position information, corrects said first position information with a first correction value,

which depends on the moving speed of said head, according to said comparison result, and corrects said second position information with a second correction value, which depends on the moving speed of said head, according to said comparison result.

8. (Cancelled)

9. (Original) The head positioning control device according to Claim 6,
wherein

said demodulation circuit demodulates a track number and offset information
from said position signal; and

said control circuit corrects said offset information with a correction value
where gain, which depends on the recording position of said offset information, is added to
the moving speed of said head with the recording position of said track number as a
reference.

10. (Original) The head positioning control device according to Claim 6,
wherein said demodulation circuit demodulates a position signal of a magnetic disk read by a
magnetic head.

11. (Currently Amended) A disk device comprising;
a head for at least reading a disk;
an actuator for positioning said head to a predetermined position of said disk:

a demodulation circuit which demodulates a position signal of said disk read by said head; and

a control circuit which calculates a demodulation position according to said demodulation result and controls the actuator for driving said head by calculating control quantity according to the position errors between said demodulation position and the target position,

wherein said control circuit corrects said demodulation result including PosN and PosQ obtained by a four phase offset signal of said position signal with a dynamically-obtained correction value which depends on an actual moving speed of said head and calculates said demodulation position; and

wherein said control circuit further detects said moving speed of the head based on said position signal read by said head,

wherein said demodulation circuit demodulates a track number and offset information from said position signal, and

wherein said control circuit selects said track number as said demodulation position when the moving speed of said head is faster than a predetermined speed, and calculates demodulation position by correcting said PosN and Pos Q with said correction value obtained by compensated moving speed with a gain according to recording positions of the offset information in said position signal of said disk.

12. (Original) The disk device according to Claim 11, wherein
said demodulation circuit demodulates a first position information and a second
position information, which have different phases from each other, from said position signal;
and

said control circuit compares said first position information and said second
position information, corrects said first position information with a first correction value,
which depends on the moving speed of said head, according to said comparison result, and
corrects said second position information with a second correction value, which depends on
the moving speed of said head, according to said comparison result.

13. (Cancelled)

14. (Original) The disk device according to Claim 11, wherein
said demodulation circuit demodulates a track number and offset information
from said position signal; and

said control circuit corrects said offset information with a correction value
where gain, which depends on the recording position of said offset information, is added to
the moving speed of said head with the recording position of said track number as a
reference.

15. (Original) The disk device according to Claim 11, wherein said demodulation circuit demodulates a position signal of a magnetic disk read by a magnetic head.